

105 00619

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

30 JUN 2004

(43) International Publication Date
24 July 2003 (24.07.2003)

PCT

(10) International Publication Number
WO 03/061122 A2

- (51) International Patent Classification⁷: H03K
- (21) International Application Number: PCT/IB02/05619
- (22) International Filing Date:
18 December 2002 (18.12.2002)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
01403383.1 28 December 2001 (28.12.2001) EP
- (71) Applicant (for all designated States except US): KONINKLIJKE PHILIPS ELECTRONICS N.V. [NL/NL];
Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): GASMI, Ahmed

[DZ/NL]; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). HOURANY, Jean [FR/NL]; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

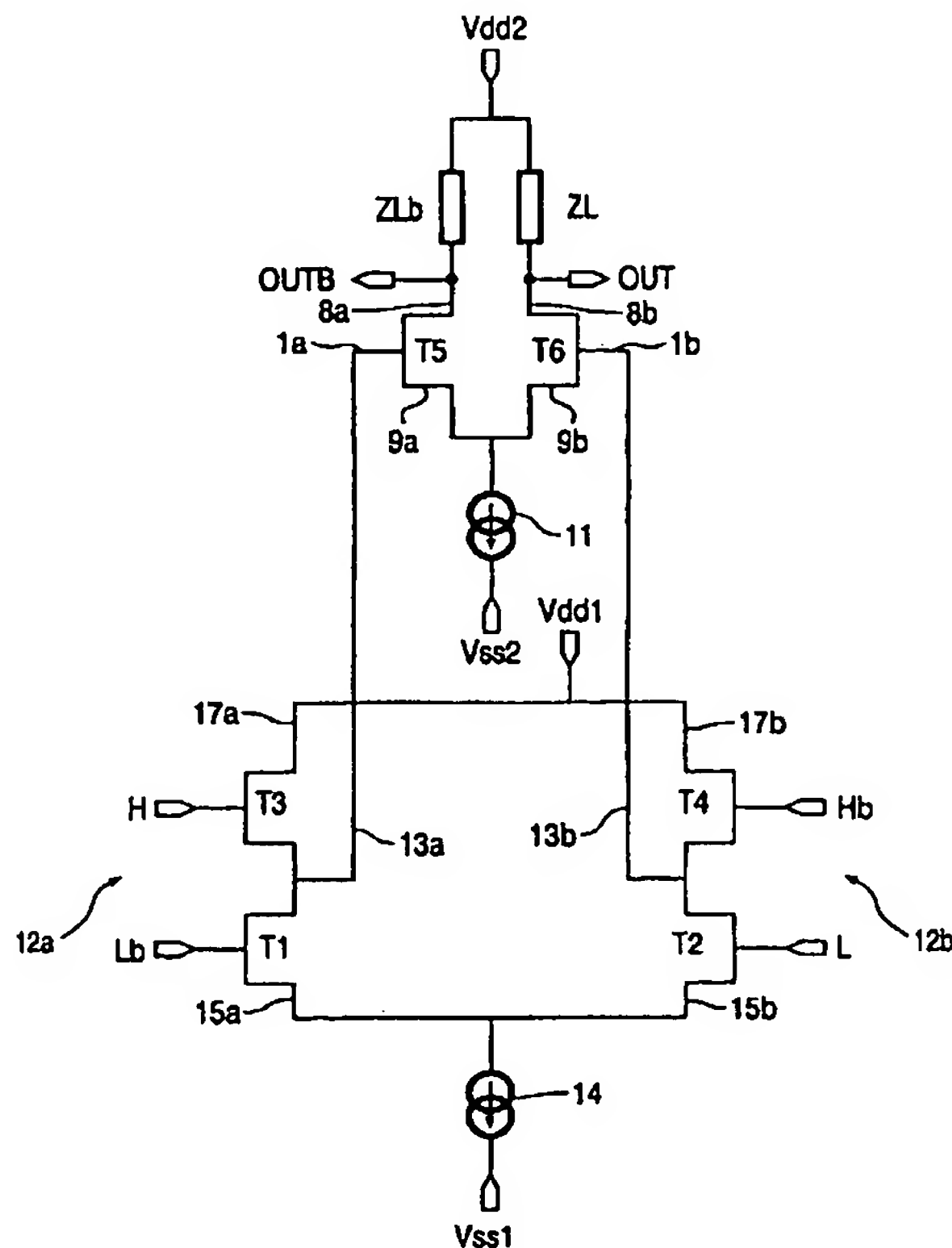
(74) Agent: LOTTIN, Claudine; Internationaal Octrooibureau B.V., Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,

[Continued on next page]

(54) Title: REGENERATING AMPLIFIER CIRCUIT



(57) **Abstract:** An amplifier circuit for regenerating complementary digital signals which comprises a differential pair of transistors (T5, T6). This circuit also comprises a pair of push-pull amplifiers (12a, 12b) which consists of a first and a second push-pull amplifier having a first and a second low input (L, Lb) which are coupled to a source for the input signal and its complement, respectively, a first and a second high input (H, Hb) which are coupled to a source of the complementary input signal and to a source of the input signal, respectively, a first and a second output (13a, 13b) which supply, under a low impedance and during switching, brief and intense current pulses of said complementary input signals of increased amplitude in order to apply these pulses to the first and second control inputs (1a, 1b) of the first and second transistors (T5, T6) of the differential pair, respectively.

WO 03/061122 A2